

REMARKS

Claims 1-10, 12, 13 and 18-28 are pending in this application. Claims 1-10, 12, 13 and 18-28 are rejected under 35 USC 112, first paragraph, as failing to comply with the enablement requirement. Claims 18-20 and 25 are rejected under 35 USC 112, first paragraph, as indefinite. Claims 1-10, 12, 13 and 18-28 are rejected under 35 USC 103(a) as being unpatentable over Taylor alone or in view of McComas and Kaiba.

Comments regarding claim for priority under 35 USC 119(b):

A certified copy of the European application claimed as priority for the present application is provided to the Office as an attachment to this paper.

Response to rejections under 35 USC 112:

Independent claims 1 and 18 have been amended herein to eliminate limitations related to the control of spray parameters based on a comparison of actual geometry data and desired contour line geometry data. Thus, the rejections under 35 USC 112 have been rendered moot and should be withdrawn.

Response to rejections under 35 USC 103:

Independent claims 1 and 18 have been amended herein to include the limitation of controlling a blasting angle parameter for an abrasive grit spray to remain constant during the surface treatment. The Examiner has previously asserted a *prima facie* case for obviousness by assuming that one skilled in the art would have recognized that different blasting angles would produce different results, and that it would have been obvious for one skilled in the art to have maintained a constant blasting angle in order to maintain a constant amount of roughening over the surface. The Applicant traverses this *prima facie* case for obviousness as follows.

First, McComas specifically teaches that blasting angle is not a critical parameter, but is simply a matter of preference. (see column 3, lines 9-23, and particularly line 13) Second, Taylor reinforces the lack of importance of blast angle by requiring that only the jet pressure and

nozzle traverse rate must be carefully controlled. (see column 4, lines 12-14) Finally, Kailba actually teaches away from maintaining a constant blasting angle. (see FIG. 1 where only the Z direction is controlled even though the angle of surface changes along the X axis) Thus, the prior art does not support the Examiner's assertion, and the *prima facie* case for obviousness appears to be based on the Examiner's hindsight guided by the Applicant's invention, which without some basis in the art, is not adequate to support the rejections under 35 USC 103. Therefore, the obviousness rejections should be withdrawn, and independent claims 1 and 18 and their respective dependent claim should be passed to issue.

New claims:

New claims 29 and 30 are added herein to more fully encompass the Applicant's invention. Support for these claims can be found in the first full paragraph of page 7 of the specification.

Claim 29 includes the limitations of obtaining data representative of contour line geometries of at least two surfaces of the component; and controlling spray parameters of a spray of abrasive particles directed toward the component to be responsive to the data to produce a different surface roughness on at least two of the surfaces, with the surface roughness on each of the at least two surfaces being homogeneous across each respective surface. The Applicant has recognized that components having differently curved or oriented surfaces may be uniquely treated responsive to the respective surface contours to achieve a different surface roughness in different areas; such as the root 39, airfoil 37, and platform 41 of a gas turbine blade 23, as illustrated in FIG. 6 of the present application.

Claim 30 includes the limitations of controlling spray parameters to be responsive to data representative of a contour line of a surface to produce a surface roughness according to a predetermined non-constant function along the contour line.

Nothing in the cited prior art teaches or suggests such processes or such results, and these new claims are believed to be in condition for allowance.

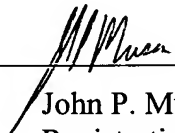
Conclusion:

Applicant respectfully requests that the Examiner reconsider the objections and rejections in light of the present amendments and arguments and timely pass the application to allowance.

The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper, including the fee for one extra independent claim, or to credit any overpayments, to Deposit Account No. 19-2179.

Respectfully submitted,

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